

Complete Summary

GUIDELINE TITLE

Evaluation and management of obstructing cerumen.

BIBLIOGRAPHIC SOURCE(S)

University of Texas, School of Nursing, Family Nurse Practitioner Program.
Evaluation and management of obstructing cerumen. Austin (TX): University of Texas, School of Nursing; 2007 May. 17 p. [32 references]

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

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SCOPE

DISEASE/CONDITION(S)

Ear canal cerumen obstructing visualization of ear structures including portions of external auditory canal, tympanic membrane, and the middle ear landmarks

GUIDELINE CATEGORY

Diagnosis
Evaluation
Management
Treatment

CLINICAL SPECIALTY

Emergency Medicine
Family Practice
Geriatrics
Internal Medicine
Nursing
Otolaryngology
Pediatrics

INTENDED USERS

Advanced Practice Nurses
Nurses
Physician Assistants
Physicians

GUIDELINE OBJECTIVE(S)

- To provide evidence-based recommendations for the management and evaluation of ear canal cerumen obstruction
- To enhance positive outcomes and avoid negative outcomes in patients with cerumen obstruction

TARGET POPULATION

Patients who meet the evaluation criteria for ear canal cerumen obstruction and are not at risk for complications of cerumen removal or obstructing cerumen

INTERVENTIONS AND PRACTICES CONSIDERED

Evaluation/Diagnosis

1. Subjective assessment including history and symptoms such as chronic infections, self-care practices, injuries, hearing loss, and family history of cerumen obstruction
2. Objective assessment/physical exam including hearing conduction and complete head, eyes, ears, nose and throat (HEENT) documentation
3. Physical exam
4. Audiometric assessment to identify abnormalities that are structural or neurologic in origin (in patients with tinnitus)

Management/Treatment

1. Patient and family education
2. Non-pharmacological treatment
 - Use of an instrument to remove ear wax
 - Ear irrigation
3. Pharmacological treatment
 - Water-based ear drops
 - Oil-based ear drops
 - Non-water and non-oil based ear drops
4. Specialty Referral/Surgery

- Referral to ears, nose and throat (ENT) specialist for difficult cerumen removal
- Refer to an ENT or other specialist for atypical presentations of hearing loss without cerumen impaction
- Surgery referral

MAJOR OUTCOMES CONSIDERED

- Quality of life
- Efficacy of treatment
- Complications associated with removal of impacted cerumen

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Online searches were performed for dates 2000 to 2007 of the following databases: PubMed, Medline, CINAHL, BJGP systemic review and meta-analysis as well as other full text articles from PubMed using keywords ear wax and ear wax removal. Also articles were found in MEDLINE/EBSCO using earwax removal, cerumen, impacted, obstructed. Cochrane was the source for the Burton MJ, Doree CJ, Eardrops for the removal of ear wax (Review).

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Subjective Review

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Quality of Evidence (Based on the U.S. Preventive Services Task Force Ratings)

- **Good:** Evidence includes consistent results from well-designed, well-conducted studies in representative populations that directly assess effects on health outcomes.
- **Fair:** Evidence is sufficient to determine effects on health outcomes, but the strength of the evidence is limited by the number, quality, or consistency of the individual studies, generalizability to routine practice, or indirect nature of the evidence on health outcomes.
- **Poor:** Evidence is insufficient to assess the effects on health outcomes because of limited number or power of studies, important flaws in their design

or conduct, gaps in the chain of evidence, or lack of information on important health outcomes.

METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses
Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Journal articles were analyzed for quality based on type of design study, method, number of subjects, representative sample, generalizability of results, and applicability for target population.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Strength of Recommendations (Based on the U.S. Preventive Services Task Force Ratings)

A. There is good evidence that the recommendation improves important health outcomes. Benefits substantially outweigh harms.

B. There is at least fair evidence that the recommendation improves important health outcomes. Benefits outweigh harms.

C. There is at least fair evidence that the recommendations can improve health outcomes but the balance of benefits and harms is too close to justify a general recommendation.

D There is at least fair evidence that the recommendation is ineffective or that harms outweigh benefits.

I. Evidence that the recommendation is effective is lacking, of poor quality, or conflicting, and the balance of benefits and harms can not be determined.

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

The guideline was developed by a group of family nurse practitioner (FNP) students and submitted for review to FNP program faculty and expert reviewers. Before submitting to the guideline committee, revisions were made based on reviewer recommendations.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Strength of recommendations (A, B, C, D, I) and quality of evidence (good, fair, poor) are defined at the end of "Major Recommendations" field.

Definitions: Impacted cerumen

1. Obstruction of the ear canal by cerumen/ear wax (Clinical Practice Guidelines for Nurses in Primary Care [Health Canada], 2000).
2. Excessive accumulation of cerumen in auditory canal is known as cerumen impaction. Cerumen is considered to be impacted if one or more of the following conditions are present:
 - Visual: Cerumen impairs the exam of clinically significant portions of the external auditory canal, tympanic, membrane, or middle ear.
 - Qualitative: Extremely hard, dry, irritative cerumen causes symptoms such as pain, itching, and/or hearing loss.
 - Inflammatory: This is associated with foul odor, infection, or dermatitis.
 - Quantitative: Presence of obstructive, copious cerumen that requires a physician's/provider's skill to remove with magnification and multiple instrumentation. ("Cerumen removal," 2006).

Risks vs. benefits of cerumen removal should be evaluated before attempting the procedure:

1. Evaluation as to the need to visualize will be prime importance, since most otitis media is viral and, therefore, self-resolving.
2. Hearing loss is usually not improved significantly vs. iatrogenic damage risk for primary care providers
3. First attempt loop device by the provider who has training in the following if irrigation attempt is unsuccessful.
4. Specific recommendation or use of a cerumenolytic is of limited value to patient or provider from present literature review.

Treatment options for removal of impacted cerumen should be individualized treatment decisions based on amount, location, and quality/consistency of the cerumen as well as the individual's health status based on history and physical exam. Treatment options include:

1. Eardrops/cerumenolytics (pharmacological and nonpharmacological)
2. Ear syringe/irrigation
3. Curettage
4. Suction
5. Combination of above treatment options

(Crummer & Hassan, 2004; Dunphy, 2004; Aung & Mulley, 2002; Deguine & Pulec, 2002; Marcinuk & Roland, 2002; Grossan, 2000; Grossan, 1998)

Subjective Assessment/History and Symptom Analysis

1. Chief complaint(s) and/or clinical manifestations, of possible cerumen impaction, may be unilateral or bilateral with complaints of
 - Hearing loss
 - Itching
 - Irritation
 - Pain
 - Fullness
 - Vertigo, loss of balance
 - Tinnitus
 - Chronic cough

("Ceruman removal," 2006; Subha & Raman, 2006; Baer, 2005; Mandel, Dohar, & Casselbrant, 2004; Memel et al., 2002) **Evidence Good, Recommendation B**

2. Review of systems pertaining to possible cerumen impaction and based on presenting complaints
 - Head: Headache (H/A) relieved by over-the-counter (OTC) medications; vision problems
 - Eyes: Watery, itching
 - Ears: Unilateral or bilateral pain, itching, fullness, tinnitus, loss of hearing
 - Nose: Clear-yellow nasal discharge and/or congestion
 - Throat: Scratchy, post-nasal drip (PND), cough
 - Neck: Lymphadenopathy
 - Cardiovascular (CV): Light-headedness, syncope, headache
 - Neurological: Sensation of loss of balance, dizziness, or vertigo

(Baer, 2005; Crummer & Hassan, 2004; Dunphy, 2004; Marcinuk & Roland, 2002; Grossan, 2000) **Evidence Good, Recommendation B**

3. History of present illness
 - Onset, duration, location, severity, aggravating and alleviating factors related to clinical manifestations stated in chief complaint

(Baer, 2005; Crummer & Hassan, 2004; Dunphy, 2004; Marcinuk & Roland, 2002; Grossan, 2000) **Evidence Good, Recommendation B**

4. Past medical history
 - Ear infections

- Perforation of tympanic membrane
- Presence of tubes, ear surgeries, ear trauma
- Severe vertigo
- Cholesteatoma
- Benign growths of bony canal
- Ear pathology, (e.g., psoriasis, external otitis, exotoses)
- Prior cerumen removal, number of times
- Type of cerumen removal procedures and associated problems (e.g., irrigation, ear curette, cerumenolytics (pharmacological and non-pharmacological))

(Baer, 2005; Crummer & Hassan, 2004; Dunphy, 2004; Marcinuk & Roland, 2002; Grossan, 2000) **Evidence Good, Recommendation B**

5. Family history

- Cerumen impaction
- Ear pathologies (infections, structural anomalies, loss of hearing)

(Baer, 2005; Crummer & Hassan, 2004; Dunphy, 2004; Marcinuk & Roland, 2002; Grossan, 2000) **Evidence Good, Recommendation B**

6. Social history

- Noise pollution
- Toxin exposures
- Ear hygiene activities (decrease or increase risk of cerumen impaction, ear infections)

(Baer, 2005; Crummer & Hassan, 2004; Dunphy, 2004; Marcinuk & Roland, 2002; Grossan, 2000) **Evidence Good, Recommendation B**

7. Medication history

- Aspirin (ASA), nonsteroidal anti-inflammatory drugs (NSAIDs), ototoxic antibiotics

(Baer, 2005; Crummer & Hassan, 2004; Dunphy, 2004; Marcinuk & Roland, 2002; Grossan, 2000) **Evidence Good, Recommendation B**

8. Allergies

- Environmental allergies
- Medication allergies, including neomycin, a common ingredient in antibiotic otic solutions

(Baer, 2005; Crummer & Hassan, 2004; Dunphy, 2004; Marcinuk & Roland, 2002; Grossan, 2000) **Evidence Good, Recommendation B**

Objective Assessment/Physical Examination (pertaining to possible cerumen impaction)

1. Head, eyes, ears, nose, and throat (HEENT): Assess for allergy symptoms, infection, structural, and sensorineural pathologies

- Weber and Rinne tests to assess for conductive or sensorineural hearing loss
- Ears: External canals and tympanic membranes (TMs) should be inspected for signs of foreign bodies, structural pathologies; perforation of the TM; cerumen impaction; infection (pus)
- Cerumen should be assessed for amount, color, consistency (hard, soft, wet, dry)

(Baer, 2005; Crummer & Hassan, 2004; Dunphy, 2004; Marcinuk & Roland, 2002; Grossan, 2000) **Evidence Good, Recommendation B**

2. Cardiovascular

- Auscultation over the neck, periauricular area, orbits, and mastoid should be performed for vascular origin of tinnitus.
- Tinnitus of venous origin can be suppressed by compression of ipsilateral jugular vein.

(Baer, 2005; Crummer & Hassan, 2004; Dunphy, 2004; Marcinuk & Roland, 2002; Grossan, 2000) **Evidence Good, Recommendation B**

3. Neurological

- Cranial nerves should be examined for evidence of brain-stem damage or hearing loss
- Stimulation of small branch of vagus nerve that supplies part of the auditory canal may cause cough
- Assess for gross motor and focal neurological deficits

(Baer, 2005; Crummer & Hassan, 2004; Dunphy, 2004; Marcinuk & Roland, 2002; Grossan, 2000) **Evidence Good, Recommendation B**

Diagnostic Procedures

1. Physical exam is main diagnostic tool. (Crummer & Hassan, 2004; Grossan, 2000). **Evidence Good, Recommendation B**
2. Individuals with tinnitus should have an audiometric assessment to identify abnormalities that are structural or neurologic (peripheral or central) in origin (Crummer & Hassan, 2004; Grossan, 2000). **Evidence Good, Recommendation B**

Criteria for Diagnosis of Impacted Cerumen/Differential Diagnoses

1. Conductive hearing loss may indicate
 - Cerumen impaction
 - Otosclerosis
 - Middle ear effusion: usually unilateral hearing loss, TM is dull, hypomobile, and may have bubbles in middle ear
 - Perforated TM
 - Benign growths of the bony ear canal (exostoses and osteomas)

(Baer, 2005; Crummer & Hassan, 2004; Dunphy, 2004; Marcinuk & Roland, 2002; Grossan, 2000) **Evidence Good, Recommendation B**

2. Subjective tinnitus may indicate
 - Cerumen impaction
 - Otosclerosis
 - Presbycusis
 - Ototoxicity (noise, medication)

(Baer, 2005; Crummer & Hassan, 2004; Dunphy, 2004; Marcinuk & Roland, 2002; Grossan, 2000). **Evidence Good, Recommendation B**

3. Vertigo or loss of balance may indicate
 - Cerumen impaction
 - Meniere's disease
 - Acoustic neuroma

(Baer, 2005; Crummer & Hassan, 2004; Dunphy, 2004; Marcinuk & Roland, 2002; Grossan, 2000). **Evidence Good, Recommendation B**

4. Ear pain, irritation, or fullness may indicate
 - Cerumen impaction
 - External or middle ear infection
 - Middle ear effusion; perforated TM

(Baer, 2005; Crummer & Hassan, 2004; Dunphy, 2004; Marcinuk & Roland, 2002; Grossan, 2000) **Evidence Good, Recommendation B**

Management

Overall treatment factors include ruling out contraindications to removing cerumen and differential diagnoses other than or in addition to impacted cerumen.

Various treatment options exist for cerumen removal and must be chosen on an individual basis.

Management techniques are individualized to patient symptoms and goals.

Individualized treatment decisions are also based on the amount, consistency, and location of the cerumen (Deguine & Pulec, 2002; Grossan, 2000). **Evidence Good, Recommendation B**

Step 1 – Patient and Family Education

1. Explain purpose of cerumen and causes of cerumen impaction.
 - Cerumen is a protective secretion produced by the apocrine glands in the outer portion of the ear canal.
 - It protects the ear canal and TM by trapping foreign bodies (e.g., dust, moisture, bacteria, and fungi).
 - Impacted ear wax is common and not a sign of poor hygiene.
 - Human earwax is a Mendelian trait consisting of wet and dry types:
 - I. Wet earwax is brownish and sticky.
 - II. Dry earwax, lacking some of the moist secretions from the apocrine glands, is hard and becomes impacted easier.

- Age-related atrophy of modified apocrine glands leads to decrease in production of watery components making cerumen dryer, harder, coarser and more easily impacted.
- In most persons the ear canal is self-cleansing.
- Ear wax migrates laterally out of the ear and can be safely cleared in the course of normal washing without putting anything into the outer ear smaller than one's index finger. Removal of protective ear wax exposes delicate skin of the ear canal to infection
- May result in otitis externa and non-specific irritation that can lead to a vicious cycle of cleaning and further irritation
- Some individuals produce larger amounts of cerumen or it is the harder and dryer consistency.
- Necessary to extract cerumen when there are signs and symptoms of impaction
- Excessive wax usually presents as increased hearing difficulty that may become worse with the addition of water causing it to expand blocking the canal.
- There can be pain if there is infection or if the wax causes pressure on the TM.
- Impacted cerumen can cause tinnitus.
- Impacted cerumen can cause a cough due to inappropriate stimulation of a small branch of the vagus nerve supplying part of the ear canal.

(Current Medical Diagnosis & Treatment, 2007; Baer, 2005; Aung & Mulley, 2002; Deguine & Pulec, 2002; Grossan, 2000). **Evidence Fair, Recommendation C**

2. Explain rationale for removing impacted cerumen.

- Visualize the external auditory canal, TM, and middle ear structures during an exam
- Decrease risk of infection
- Decrease risk of damaging ear canal and/or TM from pressure
- Decrease risk of discomforts that may result from cerumen impaction including:
 - I. Tinnitus
 - II. Vertigo
 - III. Loss of hearing
 - IV. Pain/irritation

(Current Medical Diagnosis & Treatment, 2007; Baer, 2005; Deguine & Pulec, 2002; Grossan, 2000) **Evidence Fair, Recommendation C**

3. Explain risks of self-cleaning.

- Using cotton tipped swabs and other articles like hair pins, matches, and pencils to remove cerumen at home may:
 - I. Perforate TM or irritate skin in auditory canal leading to external otitis
 - II. Push cerumen further back into auditory canal over-cleansing can destroy natural protective environment of auditory canal

(Baer, 2005; Nussinovitch et al., 2004; Deguine & Pulec, 2002; Grossan, 2000) **Evidence Good, Recommendation A**

Step 2 – Non-pharmacological Treatment

1. Use of an instrument such as an ear wax removal loop or a specific tool like the Jobson Horne probe
 - Instrumentation is a preferred method of removing ear wax that is obstructing visualization of the tympanic membrane and its landmarks.
 - There is less chance of adverse complication such as a reported 1/1000 adverse event statistic if this method is employed by the provider himself or herself and not delegated (Sharp, et al., 1990; Chang & Pedler, 2005). **Evidence Fair, Recommendation B**
2. Ear irrigation
 - Syringing is generally not recommended because of pressure per square inch (psi) that can reach 110 psi.
 - Use of specifically made ear electric irrigation devices have built in precautions such as dial-up pressure that is maintained at non harmful levels.
 - Instructions can be incorporated into policy for training those if the provider chooses to delegate this procedure.
 - Ear irrigation alone can have success rates of 70% in nearly all cases.
 - Policy is important when irrigation is used because of the chance of iatrogenic adverse events or worsening of existing problems (Hand & Harvey, 2004; Price, 1997). **Evidence Fair, Recommendation B**

Step 3 – Pharmacological Treatment

Using ear drops to remove impacted ear wax is better than no treatment, but no particular sort of cerumenolytics can be recommended over any other and no adverse effects were found (Burton & Doree, 2003). Water-based preparations have a cerumenolytic activity, whereas oil-based preparations have only softening effects (Hand & Harvey, 2004). Water-based and oil-based preparations are equally effective in clearing earwax, and they are probably more effective than no treatment. Comparison between different water-based or oil-based preparations does not demonstrate any major advantages of one preparation over another (Hand & Harvey, 2004). A patient with earwax can stay in the waiting room following the initial series of five attempts at syringing, with water instilled in the ear canal. After 15 minutes, the earwax is removed as easily as in the usual strategy using oil instilled for three days (Eekhof et al, 2001).

1. Water-based ear drops: Water based preparations include acetic acid, Cerumenex, Colace (Docusate sodium), hydrogen peroxide, Molcer, sodium bicarbonate, Waxsol, Cerumenex (triethanolamine polypeptide) (Hand & Harvey, 2004). One study suggests a single application of Colace followed by irrigation was more effective than Cerumenex with irrigation for dissolving cerumen and allowing complete visualization of the tympanic membrane in patients (Robinson, 2001). Colace appears more effective than most other water-based preparations, but saline is equally, if not more, effective. **Evidence Good, Recommendation C**
2. Oil-based eardrops: Oil-based preparations include almond oil, Cerumol, Diotyl-medo, Earex, and olive oil (Hand & Harvey, 2004). **Evidence Fair, Recommendation C**

3. Non-water, non-oil based eardrops: Non-water, non-oil based preparations include Audax and Exterol. **Evidence Fair, Recommendation C**

Step 4 – Surgery/Referral

Refer to ear, nose and throat (ENT) specialist for difficult cerumen removal:

1. Suspect previous perforation
2. Patient gets dizzy when irrigation water is correct temperature (37 degrees Celsius)
3. Ear canal partially swollen
4. Any attempt at cerumen removal elicits severe pain which suggests adhesion of cerumen to ear canal
5. Abnormal ear anatomy
6. Individual is unable to cooperate

(Current Medical Diagnosis & Treatment, 2007; Deguine & Pulec, 2002; Grossan, 2000; Rudy, 2000) **Evidence Good, Recommendation B**

Refer to an ear, nose and throat or other specialist:

1. Atypical presentations of hearing loss without cerumen impaction
2. Presence of foreign body in ear
3. Transparent membrane that has developed parallel to TM
4. Sensorineural hearing loss
5. Hearing loss without obvious etiology

(Current Medical Diagnosis & Treatment, 2007; Deguine & Pulec, 2002; Grossan, 2000; Rudy, 2000). **Evidence Good, Recommendation B**

Surgery referral is indicated when:

1. Cerumen must be removed under guidance of an operating microscope

(Current Medical Diagnosis & Treatment, 2007; Deguine & Pulec, 2002; Grossan, 2000; Rudy, 2000). **Evidence Good, Recommendation B**

Definitions:

Quality of Evidence (Based on the U.S. Preventive Services Task Force Ratings)

- **Good:** Evidence includes consistent results from well-designed, well-conducted studies in representative populations that directly assess effects on health outcomes.
- **Fair:** Evidence is sufficient to determine effects on health outcomes, but the strength of the evidence is limited by the number, quality, or consistency of the individual studies, generalizability to routine practice, or indirect nature of the evidence on health outcomes.
- **Poor:** Evidence is insufficient to assess the effects on health outcomes because of limited number or power of studies, important flaws in their design

or conduct, gaps in the chain of evidence, or lack of information on important health outcomes.

Strength of Recommendations (Based on U.S. Preventive Services Task Force Ratings)

A. There is good evidence that the recommendation improves important health outcomes. Benefits substantially outweigh harms.

B. There is at least fair evidence that the recommendation improves important health outcomes. Benefits outweigh harms.

C. There is at least fair evidence that the recommendation can improve health outcomes but the balance of benefits and harms is too close to justify a general recommendation.

D. There is at least fair evidence that the recommendation is ineffective or that harms outweigh benefits.

I. Evidence that the recommendation is effective is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

REFERENCES SUPPORTING THE RECOMMENDATIONS

[References open in a new window](#)

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for selected recommendations (see the "Major Recommendations" field).

These guidelines are based on sources such as research studies (randomized controlled trials, retrospective cohort studies, prospective case studies, case control studies, and controlled observational studies), meta-analysis reviews, systematic literature reviews, expert opinion, and practice guidelines and position statements from professional organizations.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Improved evaluation and management of patients with cerumen obstruction

POTENTIAL HARMS

- Perforated tympanic membrane (TM)
- Perforated TM also increases risk for other middle ear and inner ear injuries
 - Infection
 - Perilymph fistula (a tear or opening in the round or oval window of the cochlea) subsequent to TM perforation
- Signs of perilymph fistula include nystagmus, hearing loss, and/or tinnitus
- Otitis externa, damage to external auditory canal
- Deafness
- Vertigo
- Chronic dizziness and hearing loss unresolved by surgical repair of the perforated TM
- Malignant necrotizing external otitis, colonized with *Pseudomonas aeruginosa*, has been reported as an iatrogenic sequela of ear irrigation with non-sterile water
- Syringing or mechanical removal of cerumen may cause otitis externa or damage internal ear structures with an existing or created TM perforation resulting in total or partial loss of hearing, tinnitus, vertigo

CONTRAINDICATIONS

CONTRAINDICATIONS

Contraindications to Ear Irrigation

- Past or current perforated tympanic membrane (TM)
- Cerumen that is "rock hard" can be equivalent to broken glass (e.g., if the patient indicates that any movement of the cerumen is painful, the ear wax may be fused to the canal wall or tympanic membrane).
- Swollen external auditory ear canal
- History of ear surgery or ear trauma
- Presence of myringotomy tubes
- Severe vertigo
- Cholesteatoma
- Monomeric or dimeric membrane (a thin weak area of the tympanic membrane where one or two layers have healed after perforation)
- Presence of vegetable matter (e.g., a bean or a pea)
- Presence of foreign body (e.g., watch or hearing aid battery)
- Evidence of purulent exudate filling the auditory canal

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

- These guidelines are intended for use with the stated population.
- The skill and judgment of the health care provider must dictate treatment decisions.
- These guidelines provide a general framework for managing patients with obstructing cerumen, who typically have varying ages, symptoms and goals.

- The major recommendations are not intended to be utilized all inclusively, and decisions must be based on individual symptoms and goals.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2007 May

GUIDELINE DEVELOPER(S)

University of Texas at Austin School of Nursing, Family Nurse Practitioner Program
- Academic Institution

SOURCE(S) OF FUNDING

University of Texas at Austin, School of Nursing, Family Nurse Practitioner Program

GUIDELINE COMMITTEE

Practice Guidelines Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Authors: Jerry Driskell, RN, MSN, FNP; Shawn Hart, RN, MSN, FNP; Anita Jones, RN, MSN, FNP; Sook Jung Kang, RN, MSN, FNP

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

No relationships exist between the guideline developers and any for-profit and not-for-profit companies or organizations that could potentially influence the contribution to the guideline development.

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: None available

Print copies: Available from the University of Texas at Austin, School of Nursing.
1700 Red River, Austin, Texas, 78701-1499

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI Institute on August 23, 2007. The information was verified by the guideline developer on November 9, 2007.

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